

TEAM DECISION MAKING: A KEY FACTOR IN KNOWLEDGE WORK TEAM EFFECTIVENESS

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Work teams as a method for doing business in organizations is becoming prevalent throughout the 1990's. One of the applications of teams is the area of knowledge work, where the actual product is knowledge, in terms of designs, decisions, or information. Using work teams in knowledge work is difficult because the goals are often fuzzy and output is difficult to measure. Yet, using a team in this setting is tempting because it brings individuals with different perspectives together creating synergy with the goal of creating the ultimate product. Since many organizations are implementing knowledge work teams, there is a strong need for information about making these teams effective.

A previous chapter dealt specifically with factors involved in team effectiveness. One of the key factors is effective team decision making. Mohrman, Cohen, and Mohrman, Jr. (1995) found that timely decision making related to both team and business unit effectiveness, and that knowledge work teams, "that use systematic decision-making processes are much more likely to be effective than teams that do not" (p. 251). Kellett (1993) found that effective teams had a more dramatic style of decision making, with decisions made in a forum which was interpersonally non-threatening, with encouragement of diverse thinking, facilitating more participation by members, an open attitude for change and a shared concern for excellence in completing the task, as well as continued evaluation of performance.

Effective decision making is especially important on teams of knowledge workers considering that decisions are often the product of these teams. Unfortunately, many problems can occur that reduce the quality of decisions and/or increase decision-making time. The purpose of this paper is to review the literature on team decision making and relate it to knowledge work. Subjects covered includes the benefits of effective decision making, potential problems of team decision making, possible solutions to those problems and implications for practitioners, and roles in team decision making.

Benefits of Effective Team Decision Making

The major benefits of effective team decision making are reduction of time needed to make decisions and improved decision quality. Often, in traditional organizations, a decision could be made and remade as the issue went through different functional departments with different goals, increasing time taken to make the decision while decreasing decision quality. Since teams cut

across traditional hierarchies to “flatten out” organizations, less time is spent taking the decision to appropriate parts of that hierarchy (Mohrman et al., 1995). The functional or hierarchical barriers between members are brought down, bringing competing perspectives together to make decisions. Since all members are knowledgeable about operational issues and customer requirements, a decision taking all factors into account is made. When the team uses the customer goal as the criterion for success, individual goals can be ignored for the good of the customer to get the best product. Overall cycle time is reduced, which equates to improvements in costs. The synergy of many different perspectives combines to improve quality of decision making, since those knowledgeable about the product work together with the customer.

Some benefits of effective team decision making relate to the team process itself. The authority to make decisions about how the team does its work helps build capability to make a difference in the attainment of goals, which is crucial to team empowerment (Mohrman et al., 1996). Clarifying decision responsibility is an internal team process related to the ability to arrive at a shared understanding, which is another factor in team effectiveness.

Issues and Solutions in Team Decision Making

In this next section, potential problems and solutions in team decision making will be identified, and implications for practitioners of teams discussed. These solutions should not only be applied after problems have occurred, but be kept in mind when designing teams to prevent these problems. The issues to be discussed here include teamwork stressors, conformity, conflict, polarization, self-limiting behavior, and groupthink.

Teamwork Stressors

Morgan & Bowers (1995) considered stress as a factor in decision making performance of teams. They defined team training load, team workload, team size, team composition, team cohesion, and goal structure as teamwork stressors. Team training load, defined as the replacement of trained team members with untrained members, resulted in increased training time, which decreased team decision making performance. Increased workload decreased communication between members, which decreased decision making performance. As team size increased, communication between members became more difficult and conformity was more likely, resulting in poorer decision making performance. Homogeneity of members in terms of team composition may result in accelerated decision making due to conformity; however, heterogeneous groups tend to produce better quality decisions due to the variety of ideas presented. As team cohesion increases, decision making performance increases as well. Finally, goals structured individually detract from team decision making performance while team goals enhances team decision making performance.

The implication of teamwork stressor work for practitioners is that teams should be designed with these factors in mind. Additionally, continuous assessment of these factors is necessary to identify problems and reduce their impact. Since teams are fluid creatures, not static ones, changes can occur within these factors that dictate the need for additional attention. Practitioners should train members and leaders to be aware of these factors, and try to develop organizational systems to help address any problems.

Conformity

Conformity occurs when a team member fails to challenge a decision that he or she knows is incorrect. Although strong norms and systematic decision making processes can help achieve coordination, they also tend to produce uniformity and conformity (Nemeth & Owens, 1996), which leads to reduced creativity and decreased decision quality. Uniformity and conformity go hand in hand, and both tend to hamper the quality of decision-making because of lack of new solutions.

People tend to follow the majority because they want to agree, because people tend to believe in truth in numbers, and because they do not want to be rejected as a deviate. Another contributing factor to conformity is status. Hovland & Weiss (as cited by Nemeth & Owens, 1996, p. 128) found that “persons of higher status or credibility are more effective in gaining adoption of their position than are persons of lower status or lacking in credibility.” Since status does not carry a guarantee of being correct, decision quality may decrease.

To prevent these conformity problems, practitioners must find the very delicate balance between norms to produce group cohesiveness and norms that induce conformity. Some of the processes addressed in the conflict section of this paper help keep conformity to a minimum. To address the problem of status differences, members could be asked to “check their status at the door” and promote an atmosphere where each member’s voice is important.

Conflict

Since dealing with differences is an important part of individuals working together, the topic of conflict in teams is a huge area of research. In fact, many believe that conflict management is another major contributing factor of team effectiveness. The entire subject of conflict will not be broached here; instead, this section will address conflict as it relates to team decision making.

The literature delineates two types of conflict: cognitive and affective. Cognitive conflict occurs with differences in perspectives and judgments, while affective conflict is emotional and personal. Amason (as cited by Brockmann, 1996) found that cognitive conflict was beneficial to team decision quality while affective conflict was destructive. Affective conflict led to poor decisions and low levels of decision acceptance. On the other hand, cognitive conflict is a sign that new ideas are being brought up in a group, which leads to better decisions. However, cognitive conflict, if misunderstood or misinterpreted, can turn destructive into affective conflict.

It is becoming more accepted that the expression of alternative views, which may cause conflict, is an essential ingredient to good group decision-making. Properly harnessed dissent is a valuable way to stimulate better decision-making and creativity (Nemeth & Owens, 1996). In the words of US Senator Fulbright, “we should welcome and not fear the voices of dissent” (as cited by Nemeth & Owens, 1996). So, cognitive conflict is desired in teams.

Ideally, affective conflict should be minimized while cognitive conflict is encouraged. Several methods have been proposed to introduce cognitive dissent into groups; dialectical inquiry and

devil's advocate will be discussed here. In fact, the methods of devil's advocacy and dialectical inquiry have been found to result in better decisions than consensus methods (Schwenk, as cited by Dean & Sharfman, 1996). Additionally, heterogeneity of team members seems to add dissent necessary to improve the quality of decision making

Dialectic inquiry. This method involves presenting a plan with its underlying assumptions and then presenting a counterplan based on different opposing assumptions. In the final stage, a debate ensues with the intent of "gauging the reasonableness of the assumptions and recommendations in order to arrive at the best decision" (Stone, Sivitanides & Magro, as cited by Nemeth & Owens, 1996). Mitroff (as cited by Amason, 1996) argued that the conflict induced by dialectical inquiry produces a learning process where the members come to discover different opinions and invent entirely new alternatives.

Devil's advocate. In this strategy, a team member is assigned the task of exposing problems and hidden or erroneous assumptions. That member, the "devil's advocate," is specifically told to go against the majority. Cosier (as cited by Nemeth & Owens, 1996) found that the devil's advocate method leads to better decisions than dialectic inquiry or other forms of decision making that do not formalize dissent. Since members know that someone has been assigned the role of devil's advocate, the chances of destructive affective conflict are reduced.

Polarization

Polarization in teams refers to the finding that groups tend to make more extreme decisions than do individuals. Research has found that groups make either riskier or more conservative decisions than the individuals themselves make (Davis, 1992). This can be a problem when team decisions reflect an exaggeration of risk taking or an overly conservative approach. For practitioners, this implies that groups must be aware of this polarization tendency in order to try to prevent its occurrence.

Self-Limiting Behavior

Self-limiting behavior is the tendency of individuals in groups to either withdraw or limit their contributions to the group's decision-making process (Mulvey & Veiga, 1996). One example of the detrimental effects of self-limiting behavior was the Challenger incident in 1986. One member's recommendations were ignored by other team members and he gave up due to their lack of interest. Had his recommendations been heard, it is likely that the tragedy could have been avoided.

While most teams do not work on projects that have as potential destructive effects as the Challenger incident, many suffer tragedies on a smaller level. In fact, Mulvey & Veiga (1996) found that over one half of team members surveyed admitted to using self-limiting behavior. The six most frequently cited reasons for this behavior were the presence of someone with expertise, the presentation of a compelling argument, lacking confidence in one's ability to contribute, an unimportant or meaningless decision, pressure from others to conform to the team's decision, and a dysfunctional decision-making climate. The implication of this study for

practitioners is that an environment must be created to encourage free expression of thought in order to reduce self-limiting behavior.

Groupthink

People tend to believe that stupid people make stupid decisions; this is not necessarily the case. For instance, the Bay of Pigs decision was made by some of the most intelligent people in the country. The problem was in the process; the “strain to uniformity” that often accompanies highly cohesive groups with a strong directive leader causing dissenting opinions to be self-limited (Asch as cited by Nemeth & Owens, 1996). Janis (1972) called this phenomenon “groupthink.”

Groupthink is defined as “a mode of thinking that people engage in when they are deeply involved in a cohesive in-group...members’ striving for unanimity override their motivation to realistically appraise alternative courses of action...a deterioration of mental efficiency, reality testing, and moral judgment that results from in-group pressures” (Janis, 1972, p. 9). Groupthink often occurs in cohesive groups (such as teams) when internal pressures towards conformity interfere with constructive critical analysis and ultimately leads to dysfunctional decisions.

Symptoms of groupthink. Symptoms of groupthink include direct social pressure on members who argue against shared beliefs, self-censorship of thoughts that deviate from group consensus, and an illusion of group invulnerability to failure. Additionally, members may have a shared illusion of unanimity, screening out information from outside the group that does not agree with the general group consensus and rationalizing of decisions to support the illusion. Teams in groupthink may have stereotyped views of the “enemy” or competing leaders as weak or incompetent and an unquestioned belief in the group’s inherent morality (Janis, as cited by Manz & Neck, 1995).

Thought self-leadership: From groupthink to teamthink. Manz (as cited by Neck & Manz, 1994) introduced the idea of “thought self-leadership” (TSL) as a method to utilize group thought patterns to avoid groupthink. This theory uses cognitive therapy ideas from the theoretical framework of Ellis and Burns applied to groups to change groupthink into teamthink (Manz & Neck, 1995), which is the productive, flip side of groupthink. Symptoms of teamthink are discussed below. TSL uses group thought patterns created through the combination of a team’s self-talk, mental imagery, and beliefs and assumptions (Neck & Manz, 1994).

Cognitive theorists suggest that people have beliefs and assumptions that affect the way new ideas are perceived. Self-talk refers to the ideas, based on our beliefs and assumptions, that we tell ourselves. The idea is that you become what you tell yourself you are, regardless if this is what you truly are or not. Janis (1983) suggests that group verbalizations (team self-talk) may impact group performance. Mental imagery is the process of visualizing performance before the action occurs. A group can use mental imagery to visualize the end product before it occurs, sometimes this is called a “vision.” All of these ideas impact the way a group makes decisions. If team beliefs and assumptions, self-talk, and mental imagery are constructive, the team will have constructive thought patterns, which lead to teamthink (described below), which leads to

better decisions. Destructive thought patterns lead to groupthink (described above), which leads to reduced decision-making quality.

The idea behind TSL is that teamthink can be established by combining constructive team self-management techniques of self-talk (the team's internal dialogue), mental imagery (the team's common imagination and vision of the future), and beliefs and assumptions (the team's common belief system). Combined, these self-management strategies facilitate constructive thought patterns that lead to teamthink, which is discussed in the following section.

Symptoms of teamthink. Teamthink results in enhanced group effectiveness in terms of decision-making quality and performance by moving beyond the limitations of groupthink to a synergistic combination of members knowledge and abilities (Manz & Neck, 1995). Some of the symptoms of teamthink include encouragement of divergent views, open expression of concerns/ideas, and awareness of limitations/threats. Additionally, teams undergoing teamthink recognize each member's unique value, recognize views outside of the group, discuss collective doubts, adopt/utilize non-stereotypical views, and recognize ethical and moral consequences of decisions (Manz & Neck, 1995).

Roles in Effective Team Decision Making

For effective team decision making to occur, everyone in the organization must commit to doing their parts. The following sections specify necessary factors in organizational role, team leader/manager role, and team member role in effective team decision making.

Organizational Role

Organizational processes are important in team-based organizations because the manager is less active than in traditional organizations. These processes provide some of the structure needed in the absence of the traditional manager. Mohrman et al. (1995, p. 187) found that "clarity of decision-making authority, involvement of appropriate parties in decision making, and systematic decision-making processes," are related to the way teams make decisions. These topics and organizational systems needed for team decision making will be discussed in the next few sections.

Clarity of decision-making authority. At least three factors can cause confusion in decision making authority. First, the coexistence of a team-based design and a functional organization cause confusion because of the two, sometimes conflicting, locus of authority and escalation path for decisions. Second, team-based organizations tend to want to make all decisions at the team level, when the reality is that this may not be feasible due to issues of a broader scope than the team deals with and even some decisions that are best made at the individual level. Finally, ambiguity may be a symptom of a poorly designed team structure. If teams are so segmented that the decisions of one team affect how another team does business, it is difficult to make a decision (Mohrman et al., 1995).

"Organizations that take the time to specify decision-making authority for the different teams and roles in the team-based organization are better able to make timely decisions" (Mohrman et

al., 1995, p. 188). One way to do this is to chart responsibility for decisions. A sample responsibility chart is shown in Table I. This chart enables different teams to know the scope of their decision making authority as well as specifying an escalation path. By using a chart of this nature, much confusion is avoided.

The escalation path is the path to be followed if the first group in authority is unable to come to an agreement. The decision is raised to a higher organizational level in this situation. Both the original team and the group that the decision is escalated to work together to reach a decision. In order for escalation paths to be effective, some norms must be in place. Some appropriate norms include “escalation of a decision does not mean a team has failed or has to give up ownership of the issue”, and “response time must be within an acceptable limit set by the organization.”

Often, especially in early stages of transitioning to team based organizations, teams believe that they have ultimate authority on most decisions. The team may be frustrated and upset when they are asked to get input from outside the teams. To reduce the danger of this occurring, decision authority should be clearly specified in each team’s charter. Teams must be clear on what should be decided as a team, what should be decided by individuals, and which individuals should decide.

Appropriate decision involvement. All appropriate perspectives must be included in a decision to ensure the highest decision quality (Mohrman et al., 1995). This may seem to delay a decision; but, in reality, often a decision that is hastily made without all relevant parties is reversed later, increasing the time until the correct decision is made.

Teams can make decisions at different levels of involvement. Kessler (1995) describes five of these. First, one individual may command a decision on his/her own information, a command decision. Second, a team member could make a decision after consulting other team members, a consultative decision. Third, the team can vote and get a majority decision. Fourth, the team can work together to come to a consensus on an option that everyone can support. Finally, the team can get everyone to agree so the decision is unanimous. As the decision moves down the continuum from command to unanimous, acceptance of the decision by all members and the likelihood of a correct decision increases. However, the time required to make the decision also increases.

Systematic decision-making processes. “The paradox is that, in complex knowledge-work settings, the organization must structure itself to make easier and more likely the informal processes that are required for multiple contributors to integrate; at the same time, the organization must, as much as possible, formalize the processes required to create a context where integration is possible” (Mohrman et al., 1995, pp. 193-194). Decision making is one of these processes that must be formalized for success. These processes are best taught in the team setting during the team’s first months of existence.

Mohrman et al. (1995, p. 192) found that “the use of systematic decision-making processes was the aspect of decision making that related most strongly to the timeliness of organizational decision making and related most directly and strongly to team and business-unit effectiveness.” Also, decision processes influence the quality of decisions (Dean & Sharfman, 1996).

Systematic decision making processes are “disciplined ways of collecting data, evaluating alternatives, and determining outcomes” (Mohrman et al., 1995, p. 251).

Organizations benefit from the use of systematic decision-making processes in at least three ways: added quality of decisions, shared understanding of how decisions are made which helps reduce the friction between diverse members and promotes collaboration, and participants who believe in the decision making process are more likely to agree to the decision itself. Since not all decisions are the same, the decision making process should fit the process to the decision being made. Only those who have the knowledge base or skills to make the decision should be involved. Not all decisions have to be made as a team; in fact, this is a common fallacy of teams. Requiring all decisions to be made as a team may frustrate team members who feel they do not have knowledge and input to increase the quality of the decision. Decision making becomes a waste of time for those not involved, and takes too long to make simple decisions. The decision involvement and decision process must fit the decision to be made.

An effective decision-making process “must be (1) oriented toward achieving appropriate organizational goals, (2) based on accurate information linking various alternatives to these goals, and (3) based on an appreciation and understanding of environmental constraints” (Dean & Sharfman, 1996, p. 373). Dean & Sharfman (1996) found that procedural rationality, defined as the extent to which the decision process involves the collection of information relevant to the decision and a reliance upon analysis of this information in making the choice, was significantly related to decision effectiveness. Some processes that can add procedural rationality to decision making include a “second chance” meeting, brainstorming, the Delphi method, nominal group technique, and electronic groupware.

A “second chance” meeting lets members rethink decisions after the decision is made and change their minds, if necessary. Members are encouraged to express residual doubts (Janis, as cited by Nemeth & Owens, 1996) to ensure that the correct decision is made. This method protects against ill-advised, hastily-made decisions made in the heat of the moment.

The brainstorming method harnesses group synergy by asking individuals to create many options to the situation, allowing members to build upon other’s ideas whenever possible while refraining from criticizing others’ ideas (Cosier, as cited by Nemeth & Owens, 1996). While research shows that brainstorming groups are superior to groups not given brainstorming instructions, it is also shown that the pooled efforts of individuals working in isolation produce more unique ideas than those created in brainstorming groups (Dunnette, Campbell & Jaastad, as cited by Nemeth & Owens, 1996). Also, brainstorming groups are superior to solitary individuals (Taylor, Berry & Block, as cited by Nemeth & Owens, 1996), and brainstorming increases the quantity of solutions, though not necessarily the quality (Levy, as cited by Nemeth & Owens, 1996). Brainstorming is a good method to begin the process of creating solutions; however, it should be combined with allowing members to continue developing additional ideas individually so that problems of self-limiting behavior and groupthink are avoided.

In the Delphi method, group members are given questionnaires soliciting their opinions and reasons for them (Dalkey & Helmer, 1963). Results are compiled, then sent out in a second round of questionnaires. After each round of questionnaires, information is consolidated and

again circulated anonymously among group members, until the results yield a group decision. This method takes a good amount of time and effort, but the results are a consensus, well-thought out decision. Computer methods of administering the Delphi technique speed up the process. This method should only be used when making big, long-term decisions since it is so time intensive.

The nominal group technique (NGT) takes advantage of the benefits of working as a group while avoiding many of the potential problems. First, team members individually create solutions to the problem, then each member describes his/her solution to the rest of the group. In this first phase, team members are not allowed to criticize the solution, only to clarify it. Next, members vote on the solutions, picking only the top five (or whatever number is decided). The solution and member reasoning for choosing the solution is then shared with the group, starting with the solution given the most votes, and so on. Questions may be asked by all team members. Finally, members rank the solutions, and the votes are compiled until a solution is reached. This method is good to use in situations where input from all is necessary and self-limiting behavior is potential problem. It avoids self-limiting behavior by requiring all members to participate.

Electronic groupware helps teams brainstorm solutions, prioritize them, create criteria for a solution, and come to a decision (Page & Whatley, 1994). Groupware has the advantage of harnessing the power of many individual ideas and creating shared ownership of the team decision while avoiding the boredom, time wasting, and individual power plays that often occur in face-to-face systems. Anonymity of responses that is another advantage of groupware that promotes more ideas as people do not have to face potential criticism that comes with new ideas. Social loafing (an individual not doing his/her work because the group will take care of it) is avoided because the meeting is very structured. Electronic decision making is truly consensus-based because everyone participates equally in the voting and ranking. Records can be kept, so meeting can be restarted at any future date without loss of information.

Unfortunately, research on computer-assisted groups has yielded mixed results. In a summary of empirical results, Hollingshead and McGrath (1995) concluded that participation in computer-assisted groups is more equally distributed, but overall is less than in face-to-face groups. These groups also take longer to carry out a task and are less likely to reach consensus. Results for satisfaction and user-rated effectiveness are equivocal.

Developing cognitive tools to support collaborative decision making is a very promising area of development (Mohrman et al. 1995, p.362). Tools that specified steps in evaluating trade-offs could help the team determine who should be involved in the decision, the data necessary, and the steps to be followed, as well as help evaluate solutions. Groupware is one area where this development could be useful.

Organizational systems needed for team decision making. Team-based organizations need different systems than do traditional organizations. Vertically and laterally distributed information systems are needed to give teams' access to the data necessary for making their broad-scope decisions (Mohrman et al., 1995). Often this information was only shared at management levels in traditional organizations, but teams need access to it in order to make

effective decisions. These information systems must be compatible with each other, which may especially be a problem in cross-functional teams when each function has a different system.

Organizations using teams need norms for communication, especially for electronic communication and shared data bases. Studies show that effectiveness is enhanced when these are formal norms, established by the organization. These norms also help in monitoring results and process indicators.

Mohrman et al. (1995, p. 299) found that the decision-making processes that allow for data-based decisions in which the costs and benefits of various alternatives were evaluated were most often the result of formal organizational procedures and systems. One example of this is the pharmaceutical industry, where systematic processes govern the development of potential drugs. These processes enable the generation of divergent data while highlighting a path to help decision convergence from the members.

Mohrman et al. (1995, p. 300) found that “the higher the adequacy of information technology, the better the teams performed.” Information systems are vital for lateral linkage across organizations, especially when members are geographically dispersed. Computer systems also allow teams to communicate with customers and suppliers more efficiently.

Team Leader/ Manager Role

The role of a leader in team decision making is to provide the bigger picture required to resolve conflict and make decisions involving tradeoffs with broader scope implications than the team is able to handle (Mohrman et al., 1995). Team leaders must be able to distinguish between affective and cognitive affect and facilitate conflict management (Brockmann, 1996). If unable turn the conflict into productivity, the leader should end the meeting, before risking damage to the team.

Leaders have some ways to reduce the self-limiting behavior in decision making. Before the meeting begins, if possible, the team leader should choose the right mix of team members by selecting members with little status difference or by promoting an environment which minimizes the differences, and by developing the appropriate size of the team. The leader also must frame the team decision task appropriately. During the meeting, the team leader should set the tone for the meeting by establishing team norms and appropriately determining the setting. He/she must also monitor the process and encourage self-management by team members. After the meeting, team leaders should provide honest feedback as to the final outcome, and management’s rationale if the decision was not implemented. Additionally, individual members should receive feedback concerning his/her behavior and contributions. It is the team leader’s responsibility to continually monitor the decision making process to determine if self-limiting behavior has occurred (Mulvey & Veiga, 1996).

The management team must model systematic decision-making processes for other teams to follow (Mohrman et al., 1995). Teams tend to follow the lead of managers, but “walking the walk” is much more powerful than just “talking the talk.” Unfortunately, in reality, management

teams often do not use these processes, and the talk falls upon deaf ears when it is incongruent with the walk.

When the team leader and manager are one and the same, the leader/manager should carefully distinguish which role he/she is playing to reduce confusion of the team members. It is very difficult to wear both hats, and difficult for team members to understand how to respond. While the team leader role is to ensure the functioning of the group and facilitate the process, the manager must bring the hard realities of the corporate environment into play. The manager brings information about the external environment, implements reward and evaluation systems, and often ultimately is responsible for the team. Clarifying which role you are in will help team members decide how to perceive your suggestions: as a fellow team member, or as a subordinate.

Team Member Role In Timely Decision Making

Decision-making skills is one of the six categories of skills that are needed in teams, in addition to the task skills and knowledge required to complete the task. Mohrman et al. (1995, p. 251) found that knowledge work teams, “that use systematic decision-making processes are much more likely to be effective than teams that do not.” Using them requires discipline and commitment from each team member.

Team members should avoid political behavior when making decisions. Members “who collected information and used analytical techniques made decisions that were more effective than those who did not. Those who engaged in the use of power or pushed hidden agendas were less effective than those who did not” (Dean & Sharfman, 1996, p. 38).

Conclusion

This paper has briefly overviewed some of the many elements to consider in team decision making effectiveness. The goal is to have cohesive teams with systematic decision making systems and norms that use dissent to make better decisions, yet to avoid problems such as groupthink that occur when teams are too cohesive or norms are too restrictive. It is a fine line that must be walked extremely carefully.

Another factor that is important is to match the decision-making process and decision-making involvement to the decision. It is a common fallacy that all team members must be involved in all decisions and a unanimous agreement made for teamwork to occur. This is not true, and can be frustrating to members when they do not have the knowledge to actively take part in the process. They simply wait around for a decision to be made, wasting theirs and others’ time.

One question that might be asked is, do different types of teams need different decision making processes? I would argue that using the principles cited in this paper would be enough for any team. Obviously, different team types have different needs, but the principles in decision making are the same. Some special considerations might include methods of communicating and understanding each other’s language. Since virtual teams are not collocated, computer methods of decision making might be more suitable. It may be more difficult to establish a common

ground for cross-functional teams since different vocations often have different languages. However, the ideas of clarifying goals, defining decision involvement, avoiding problems, establishing decision making authority, and enacting a systematic process remain the same, despite the team type.

Effective decision making is one of several keys to team effectiveness. It is important to note how interrelated the factors in team effectiveness are. An effective team is really a living and breathing system with many interrelated internal systems, much like the human body. Therefore, the effectiveness of decision making can not be maximized unless the other systems are addressed. This book covers several vital systems, which will start the reader down the road to team effectiveness.

Table I Sample Format for Responsibility Chart Dealing with Decision-Making Authority

	Changes to Specifications	Software/Hardware Trade-offs	Technical Design	Individual Assignments
<i>Management Team</i>	D	I	N, I	N
<i>Functional Bosses (as Individuals)</i>	I	U	N, I	N
<i>Design Team</i>	I, R	D	D (within box)	D
<i>Software Integrating Team</i>	N	I	D (interface decision)	U
<i>Systems Integrating Team</i>	I, R	I, R	D (systemwide fit issues)	U
<i>Escalation Path</i>		Design team to management team	Design team to integrating teams	To functional bosses

Key: D = the authority to decide, R = the authority to recommend, I = the authority to provide input, N = the need to know, and U = uninvolvement

Source: *Mohrman, Cohen & Mohrman, Jr., 1995, p. 189.*

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